



United States Department of Agriculture

Bill Williams Mountain Restoration Project

Record of Decision

**Kaibab National Forest
Coconino County, Arizona**



Forest Service

Southwest Region

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[DR 4300.003 USDA Equal Opportunity Public Notification Policy \(June 2, 2015\)](#)

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Record of Decision for the Bill Williams Mountain Restoration Project

**Kaibab National Forest
Coconino County, Arizona**

All or portions of Sections 1-3, 10-15, 22-27, & 34-36, T21N R1E; Sections 4-10, 15-22, & 27-31, T21N R2E; and Sections 31-33, T22N R2E, Gila & Salt River Meridian

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Contents

Introduction	1
Background.....	1
Purpose and Need for Action.....	4
Issues.....	4
Public Involvement and Documents	5
Scoping	5
DEIS.....	5
SDEIS	5
FEIS	6
Alternatives Considered.....	6
Alternative 1 - No Action	6
Alternative 2 – Modified Proposed Action	6
Alternative 3.....	7
Alternative 4.....	8
Environmentally Preferable Alternative	10
Unavoidable Adverse Effects	10
My Decision.....	10
Decision Rationale	11
Responsiveness of Alternative 2 to the Purpose and Need	11
Responsiveness of Alternative 2 to the Significant Issues.....	14
Reasons for Not Selecting Alternatives 1, 3, or 4	14
Consultation with Government Agencies and Tribes	16
Consistency with Other Laws and Regulations	17
Administrative Review	21
Objection under 36 CFR 218	21
Project Implementation, Monitoring, and Coordination.....	21
Procedure for Change during Implementation.....	22
Contacts for Information	23
Responsible Official Signature	23

Introduction

The Bill Williams Mountain Restoration Project is designed to reduce the risk of high intensity stand replacing wildfire and improve both forest health and the watershed for the City of Williams, Arizona. An environmental impact statement (EIS) was developed to analyze the potential effects of the Bill Williams Mountain Restoration Project. Four alternatives were considered and analyzed. This Record of Decision (ROD) documents the alternative I have selected to implement the project and the rationale for my decision.

Background

The Bill Williams Mountain Restoration Project area is approximately 15,200 acres (Figure 1) located adjacent and up to approximately 4 miles south-southwest of the City of Williams, Arizona and includes Bill Williams Mountain, which is the primary watershed and municipal water supply for the City of Williams. The project area has historic and cultural value, and has an important communication site for Northern Arizona located at the top of the mountain. Action - reducing hazardous fuels and moving vegetative conditions toward the desired conditions - is needed to reduce the risk of a high intensity wildfire and improve the health and sustainability of forested conditions on and surrounding Bill Williams Mountain. Work will be done to directly and indirectly improve the condition of the watershed which contributes to the City of Williams water supply.

The recent Schultz, Eagle Rock, and Slide Fires in northern Arizona and, in some cases, the ensuing flooding, have highlighted the values-at-risk in the project area and the need for treatments on Bill Williams Mountain. A high intensity, stand replacing wildfire on Bill Williams Mountain could result in the loss of critical emergency communications systems in a multi-million dollar communication site at the top of the mountain; the silting in of reservoirs that act as municipal water sources; reductions in water quality; severe flooding in the City of Williams and Supai Village downstream in Cataract Canyon; the loss of irreplaceable cultural and tribal resources; the loss of recreational areas and opportunities; the loss of important wildlife and plant habitat; and the potential loss of lives and homes.

In early 2011, the Kaibab National Forest invited the public and various interested parties to participate in numerous informal “brainstorming” sessions where participants were solicited for ideas, questions, and concerns about restoration treatments on Bill Williams Mountain. All of the ideas and comments received were helpful in refining a proposal for the project area.

A Notice of Intent (NOI) was published in the Federal Register on April 21, 2011, formally initiating scoping of the proposed action and seeking public comment on the proposal. The original proposed action included four non-significant amendments to the Kaibab National Forest Plan (Forest Plan); however, a revised Forest Plan was approved in early 2014 and there are now no Forest Plan amendments included in my decision. Using the comments received from the public, other agencies, and interested and affected tribal governments and communities during scoping of the proposed action, a list of significant and non-significant issues was identified (FEIS Section 1.6, Issues). These issues led to the development and consideration of alternatives to the original proposed action. Four alternatives were analyzed in detail and several alternatives were considered but eliminated from detailed study.

A Supplemental Draft EIS (SDEIS) was prepared in October 2013 to provide additional information and clarification for portions of the project, include updates to the analysis in the Draft EIS (DEIS) based on new information that had emerged since the original analysis was completed, and clarify portions of the project. This updated information for the project related to Alternative 2 – Proposed Action.

The Forest Service collaborated extensively with the U.S. Fish and Wildlife Service throughout all phases of project development, especially as it pertains to conservation of Mexican spotted owls (see section 3.6 of chapter three for more information).

After the team analyzed the comments for the DEIS and the SDEIS, the proposed action was modified. The original proposed action was described using operability zones for mechanized equipment, and the modified proposed action uses treatment methods to describe the thinning activities that are proposed for the project. The four alternatives analyzed in detail in this FEIS include Alternative 1 – No Action, Alternative 2 – Modified Proposed Action (here after referred to as Alternative 2), and Alternatives 3 and 4, which were developed to address one or more significant issues associated with the proposed action.

Major Conclusions: The analysis by resource specialists indicates all of the action alternatives would reduce hazardous fuels and the risk of high intensity stand-replacing wildfires and allow for the reintroduction of fire as a natural part of the ecosystem. The action alternatives would reduce fuel buildup and help prevent the spread of wildfire onto private property and into drainages leading to the City of Williams reservoirs. Currently, and under the no action alternative, approximately 61% of the project area has the potential for active crown fire. Under the action alternatives, this reduces active crown fire susceptibility to approximately 18% for Alternative 2 (the preferred alternative), 27% for Alternative 3, and 35% under Alternative 4.

Under Alternative 2 only, approximately 8,900 acres of ponderosa pine forest surrounding the base of Bill Williams Mountain would have reduced stand densities similar to pre-settlement reference conditions. Timber stands would be thinned and grouped, which would break up the continuity of the forest structure and increase forest diversity, tree vigor, and stand resiliency. The reduction of tree densities on steep slopes will also improve forest health by reducing competition for nutrients, and would protect the loss of specialized wildlife habitat from fire and forest disease and pests.

Treating fuel accumulations would abate fire risks to Mexican spotted owl habitat, while conserving existing nesting and roosting habitat. Mistletoe infection levels would be more manageable as the area would be managed in an uneven-aged condition over time. Alternatives 2-4 would also remove poorly located roads from drainage bottoms. Alternatives 2 and 3 would allow the construction of a new and more sustainable road system that would also provide access for hazardous fuel reduction treatments. The net number of miles of open roads would remain essentially the same under all of the alternatives. Overall, I have determined the purpose and need for action would be best achieved with implementation of Alternative 2.

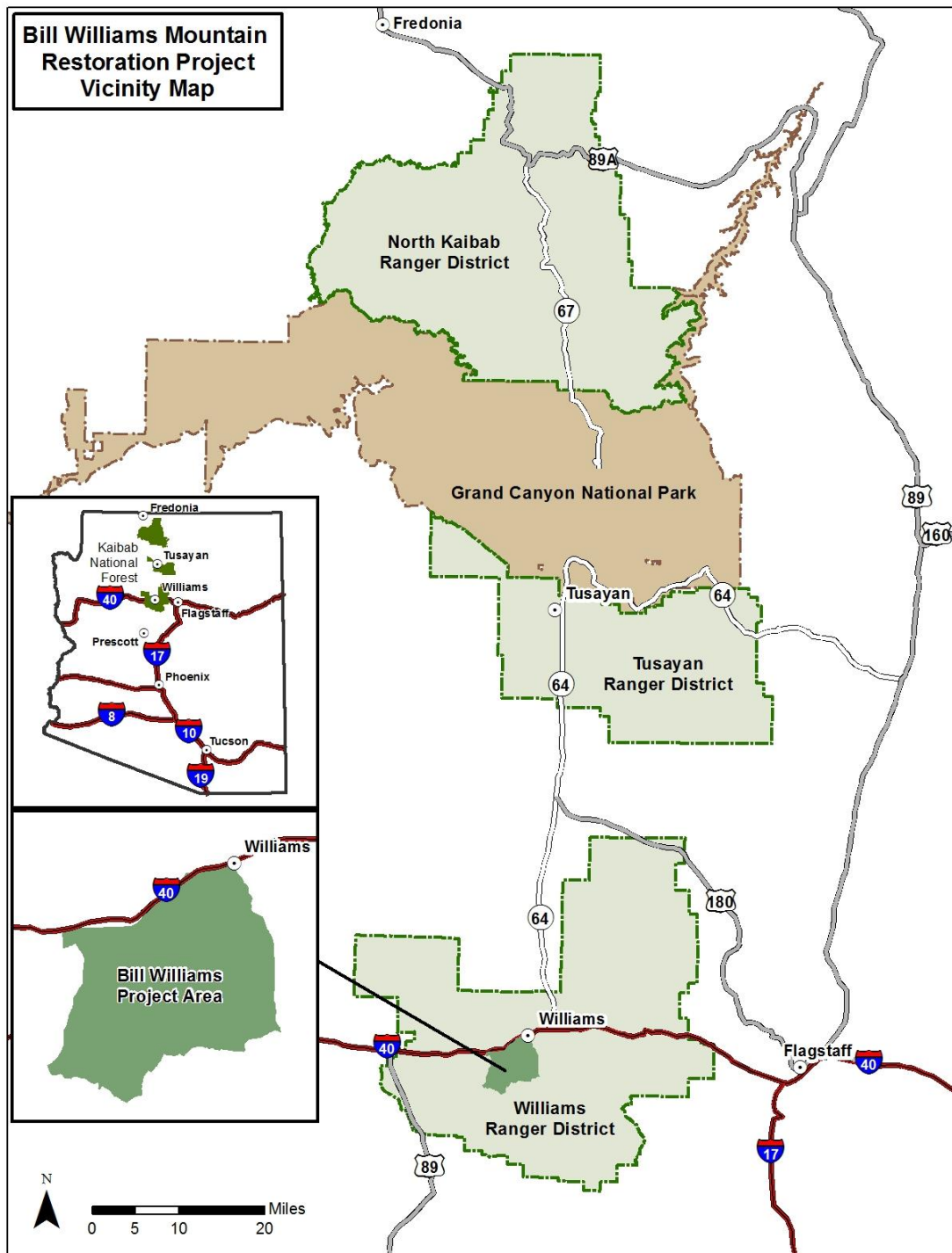


Figure 1. Location of the Bill Williams Mountain Restoration Project

Purpose and Need for Action

The purpose of the Bill Williams Mountain Restoration Project is to improve the health and sustainability of forested conditions on and surrounding Bill Williams Mountain by reducing hazardous fuels and moving vegetative conditions in the project area toward the desired conditions. This work would be done to directly and indirectly improve the watershed conditions contributing to the City of Williams water supply.

The purpose and need for action is derived from the differences between existing conditions and desired conditions in the project area. The desired conditions are based on management direction in the 2014 Land and Resource Management Plan for the Kaibab National Forest and reference conditions for vegetation in the project area.

As stated in the FEIS on page three, the need for this project is to:

- Reduce the risk for high intensity, stand-replacing wildfires;
- Reintroduce fire as a natural part of the ecosystem;
- Reduce fuel buildup to help prevent the spread of wildfire onto private property and into drainages leading to the City of Williams reservoirs;
- Reduce overall stand densities and move stand conditions toward forest structures considered to be more typical of forest structure under pre-settlement fire regimes;
- Treat fuel accumulations to abate fire risks to Mexican spotted owl habitat, while conserving existing nesting and roosting habitat;
- Improve tree vigor and stand resiliency;
- Improve the diversity of age classes and structure of woody vegetation;
- Improve ground cover, including down woody debris, fine litter and herbaceous understory composition and productivity;
- Reduce mistletoe infection levels to more manageable levels where the area can be managed in an uneven-aged condition over time;
- Provide forest products, such as firewood, for residents living in Williams, Arizona and the surrounding area, in order to meet their needs for forest and wood products, while protecting these resources for future generations; and
- Improve the motorized transportation system to provide for a more sustainable road system where poorly located roads are relocated or obliterated.

Issues

Using the comments received during the scoping process (see Public Involvement section below) from tribes, agencies, organizations, and the public, the Forest Service identified significant issues to address in the Draft EIS (DEIS Section 1.6). These issues were used to help formulate alternatives to the proposed action, develop elements or components of the alternatives, develop mitigation measures, and analyze environmental effects. Significant issues were identified as those directly or indirectly caused by implementing the modified proposed action. Non-significant issues were identified as those: 1) outside the scope of the proposed action; 2) already decided by law, regulation, Forest Plan, or other higher level decision; 3) irrelevant to the decision to be made; or 4) conjectural and not supported by scientific or factual evidence.

Public Involvement and Documents

Scoping

Public involvement for this project began prior to the publication of the Notice of Intent (NOI) to prepare an EIS. The Kaibab National Forest invited the public and various interested parties to participate in numerous informal “brainstorming” sessions during January, February, and March of 2011. Participants were solicited for ideas, questions, and concerns about treating hazardous fuels on Bill Williams Mountain, thereby improving forest health near the community.

Where possible, the input received was incorporated into the purpose and need for action and the desired conditions for the project area. Many overarching themes were repeated during these discussions. For example, many statements were made about the need to avoid incidents like the Schultz Fire and the subsequent flooding events. Others stated the Kaibab National Forest should consider the cost versus benefits of treating the fuels now versus trying to suppress a high-intensity wildfire later. All of the ideas and comments received are appreciated and were helpful in refining a proposal for the Bill Williams Mountain Restoration Project area.

The NOI was published in the Federal Register on April 21, 2011. The NOI asked for public comment on the proposal by May 23, 2011. In addition, as part of the public involvement process, the Kaibab National Forest invited public comment and participation through listing the project in the Schedule of Proposed Actions (SOPA); posting the scoping packet online (<http://fs.usda.gov/goto/kaibab/projects>); and mailing letters to potentially interested persons, tribal governments, and State and other Federal agencies. Three letters and six emails were recorded from this effort. A scoping meeting was also hosted at the Williams Ranger District on Wednesday May 11, 2011, to discuss the proposed action and accept comments. During these public scoping meetings, the Kaibab National Forest received nine written comments as well as several oral questions and comments.

Using the comments received from the public, other agencies, and interested and affected tribal governments and communities during scoping of the proposed action, the interdisciplinary (ID) team identified a list of significant and non-significant issues (DEIS Section 1.6 Issues, FEIS Section 1.8, and FEIS Appendix C) that were used to develop alternatives to the proposal.

DEIS

A 45-day comment period for the Bill Williams Mountain Restoration DEIS was provided for interested and affected publics, including appropriate local, State, and Federal Government agencies, and tribes. This period started with the publication of a notice of availability in the Federal Register on July 13, 2012. The official public comment period ended on August 27, 2012. During this period, the Forest received comments from different sectors of the public, with a range of concerns and questions. All comments were reviewed and substantive comments were considered during the comment analysis. Some comments resulted in further clarification or analysis within the FEIS.

SDEIS

A Supplemental DEIS (SDEIS) was prepared in October 2013 to provide additional information and clarification for portions of the project, include updates to the analysis in the DEIS based on new information that had emerged since the original analysis was completed, and clarify portions of the project. This updated information for the project related to Alternative 2 - Proposed Action and included:

- Consistency checks for both the 1988 Kaibab National Forest Plan, as amended and the revised 2014 Land and Resource Management Plan for the Kaibab National Forest. The FEIS and ROD are being issued under the 2014 Forest Plan.
- Clarification on the 1988 Forest Plan amendment language that was included in the project at the time the SDEIS was released.

- Two additional non-significant amendments* to the 1988 Forest Plan related to 24-inch tree retention and treatments in the 100-acre Mexican spotted owl (MSO) core area. (*Beginning in February 2014, the Kaibab National Forest had a revised forest plan. The decision for this project is being signed under the revised plan. Proposed actions associated with this project are consistent with the revised forest plan and amendments are no longer needed.)
- Clarification on how snags would be addressed in this project, including an additional project mitigation measure tied to snags and down woody debris.
- The addition of three project mitigation measures tied to wildlife habitat protection.
- Clarification, at the time, that 31 acres of cable logging treatments were proposed within the Bill Williams Mountain Mexican spotted owl protected activity center (cable logging is no longer included in the project).
- Information on the project-level pre-decisional administrative review process that had recently gone into effect (36 CFR Part 218) and how it applied to the project.

FEIS

The FEIS is a culmination of the work between the DEIS and the SDEIS. The FEIS was made available along with a draft ROD for the required objection period under 36 CFR Part 218. The FEIS has been completed under the 2014 Land and Resource Management Plan for the Kaibab National Forest. There are no amendments to the Forest Plan in the project.

I have reviewed and considered the comments received during public involvement as part of the decision making process. The response to substantive comments for the DEIS and SDEIS is included in the FEIS in Appendix B. The complete comment record is kept within the Bill Williams Mountain Restoration Project public record and is available for review at the Williams Ranger District, Williams, Arizona.

Alternatives Considered

Four alternatives were analyzed in detail for the Bill Williams Mountain Restoration Project. They include: Alternative 1, no action; Alternative 2, the modified proposed action; and Alternatives 3 and 4, which were developed to address one or more significant issues associated with the proposed action. These alternatives are summarized below, and a full description is included in chapter 2 of the FEIS. Chapter 3 of the FEIS analyzes the potential effects of implementing these alternatives. Additional alternatives include those considered in the FEIS but eliminated from detailed study (FEIS, pp. 42-44).

Alternative 1 - No Action

Alternative 1 would allow current processes to continue, along with associated risks and benefits, in the Bill Williams Mountain Restoration Project area. Current management plans would continue to guide management, and there will be no change in the level of ongoing management activities within the project area. All custodial activities such as road maintenance, law enforcement, and response to emergencies, including wildfire, would continue. None of the treatments or transportation system modifications described in the action alternatives would be implemented. Chapter 3 of the FEIS analyzes the effects of Alternative 1 and compares them to the effects of the action alternatives.

Alternative 2 – Modified Proposed Action

The management activities in Alternative 2, which is the preferred alternative, include:

- Mechanical treatments in a combination of commercial timber harvest treatments and non-commercial mechanical treatments on approximately 15,200 acres (Map 1). Treatments will thin stands with mechanized equipment to meet or move toward the desired conditions; in some stands, non-commercial treatments may be the only treatments feasible/necessary to achieve resource objectives.

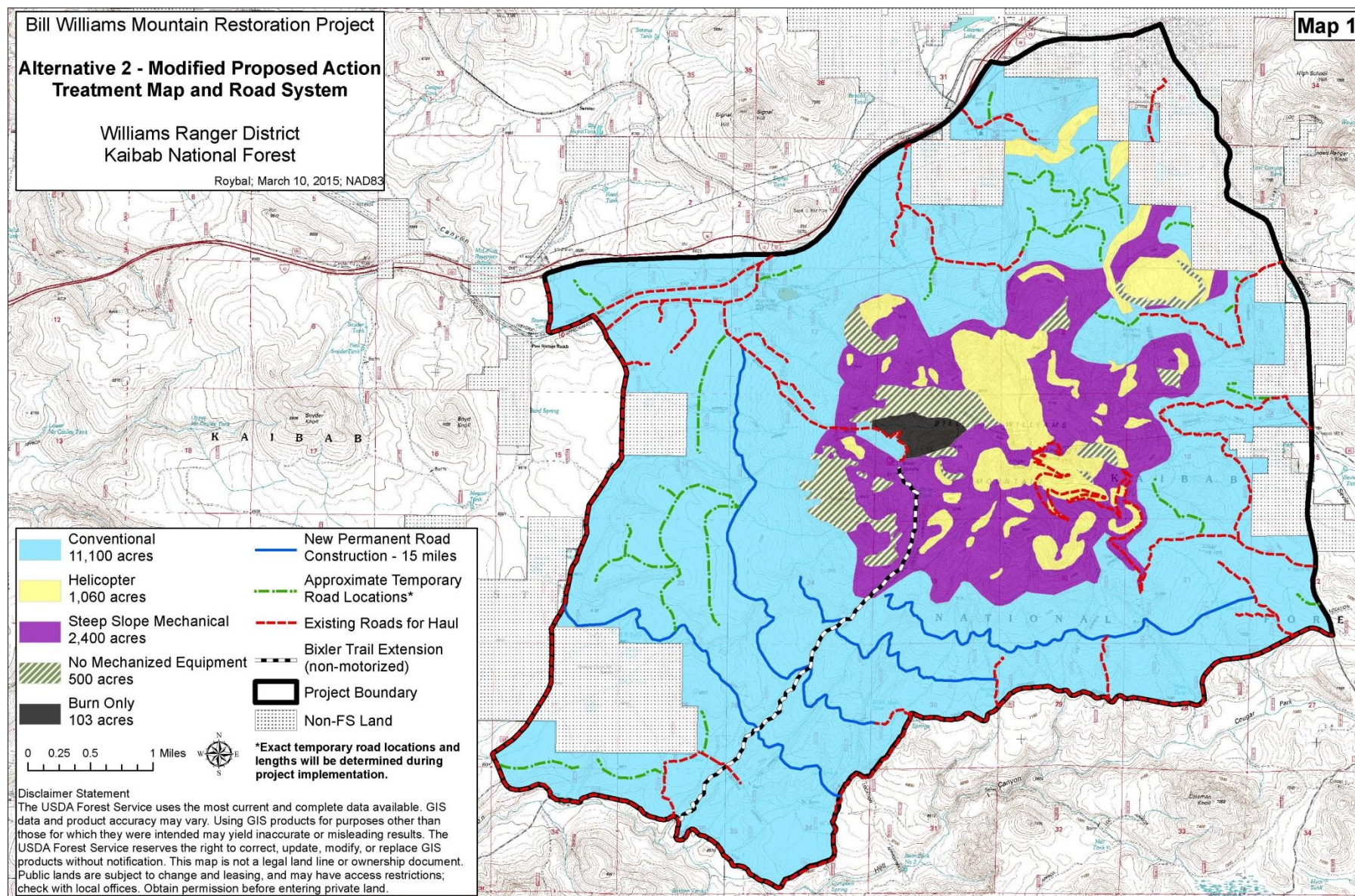
- Post-mechanical treatments on activity slash will be accomplished using whole-tree skidding, machine piling, hand piling, mulching, crushing, commercial/personal use fuelwood sales, lop and scatter, and/or prescribed burning. Some areas throughout the project area may have standing and down fuels piled and burned rather than removed.
- Rehabilitation and reclamation of areas impacted by treatments to ensure the health and productivity of the forested ecosystem is sustained, including work in aspen sites to protect newly developing aspen sprouts from elk and deer browsing with fencing and jack-strawing of activity slash.
- Strategic fuel treatments designed specifically to enhance control lines (Map 4 FEIS Appendix A) may be implemented to enable land managers to achieve resource objectives with prescribed fire while serving to protect important resources. Treatments will reduce surface, ladder, and canopy fuels (i.e. fuel loading) up to 300 feet along both sides of control lines. Approximately 2,500 acres may receive non-commercial treatments and fuels will most likely be thinned by hand-felling techniques or, where practical, machinery equipped with cutting or grinding heads. These treatments represent the minimum acreage needed to prepare stands on steeper slopes for prescribed burning and may be combined with mechanical treatments where possible.
- Prescribed fire may be applied to approximately 15,200 acres of the project area. In most areas, prescribed fire will follow or be used in conjunction with mechanical treatments. In other areas where operability is limited and more costly, such as steep slopes, prescribed burning alone may be used to meet resource objectives; this will be dependent on implementation of the strategic fuel treatments designed to enhance control lines (described above). Areas to be burned will be grouped into several burn units using natural and man-made features, such as roads, trails, and natural rock stringers, for control lines. The size, location, timing, and sequence of burning will consider impacts, such as smoke and risk of fire escape, to downwind communities and users of the Forest.
- A combination of firing techniques, including ground and aerial ignitions, may be used to accomplish objectives and minimize the risk to human resources. Finally, because the intent of prescribed burning is to reduce fuel loading, raise crown base heights, and reduce live tree density, maintenance burning may be conducted as needed to maintain desired conditions every few years for up to 40 years.
- An improved transportation system, including construction of approximately 15 miles of new roads to provide sustainable access for ground-based logging treatments (Map 1 FEIS Appendix A). Sustainable access is a road system that will require less long-term maintenance and is located to allow access to treatment areas. Additionally, approximately 16 miles of temporary roads will be constructed that would be obliterated after use (Map 1 FEIS Appendix A), and approximately 23 miles of poorly-located existing roads will be obliterated (Map 5 FEIS Appendix A). Most of the newly constructed roads will be closed to the public and open for administrative use following implementation. The resulting open road system after implementation will be reflected in the Kaibab National Forest Motor Vehicle Use Map (MVUM) (Map 7, FEIS Appendix A).
- Bixler Trail will be extended by converting a portion of Forest Service Road (FSR) 45 (from Bixler saddle south) to a non-motorized trail, constructing approximately 1 mile of new trail, and constructing a new trailhead and parking area along FSR 122 (Map 1, FEIS Appendix A).

Alternative 3

Alternative 3 (Map 2 FEIS Appendix A) is similar to Alternative 2 except for the following differences. There would be no ground-based thinning operations on slopes greater than 40 percent; instead, these areas would be treated via helicopter. Thinning in the MSO protected activity center and MSO mixed conifer nest roost recovery habitat would be restricted to nine inches diameter at breast height and below. No prescribed burning would be conducted in the Arizona Bugbane Botanical Area. Alternative 3 would include construction of 22 miles of new permanent road and 16 miles of temporary road that would be obliterated after use, and obliteration of 26 miles of poorly-located existing road. Chapter 2 of the FEIS provides a full description of Alternative 3. Chapter 3 of the FEIS analyzes the potential effects of implementing this alternative.

Alternative 4

Alternative 4 (Map 3 FEIS Appendix) is similar to Alternative 2 except under Alternative 4, a combination of commercial timber harvest and non-commercial mechanical treatments would occur on approximately 11,150 acres. Vegetative treatments would be limited to slopes less than 40 percent, except for strategic fuel lines. Alternative 4 would include constructing approximately 38 miles of temporary roads that would be obliterated after use as well as obliterating approximately 23 miles of poorly located roads within the project area. There would be no construction of the new Bixler trailhead or proposed new trail segment under Alternative 4.



Map 1. Bill Williams Mountain Restoration Project, Alternative 2 – Modified Proposed Action

Environmentally Preferable Alternative

Under the National Environmental Policy Act, the USDA Forest Service is required to identify the environmentally preferable alternative (40 CFR 1505.2(b)). This is interpreted to mean the alternative that would cause the least damage to the biological and physical components of the environment, and which best protects, preserves, and enhances, historic, cultural, and natural resources (Council on Environmental Quality, Forty Most Asked Question Concerning CEQ's National Environmental Policy Act Regulations, 46 Federal Register 18026).

In the short-term, it could be argued that Alternative 1 would best meet the definition of “environmentally preferable” because it would not alter the existing biological and physical environment and, thus, would not result in any short-term impacts to vegetation, water, wildlife or social values. In addition, it does not have any of the impacts associated with building roads or of the increased traffic associated with treatments. However, Alternative 1 does not address the pressing environmental issues identified in the FEIS, such as the need to reintroduce fire into the ecosystem, reduce the risk for high intensity stand-replacing wildfires, reduce fuel buildup to help prevent the spread of wildfire onto private property and into drainages leading to the City of Williams reservoirs, or treat fuel accumulations to abate fire risks to Mexican spotted owl habitat, while conserving existing nesting and roosting habitat.

Further, taking no action would likely lead to undesirable and unintended consequences because the environmental conditions of the area would continue to trend away from desired watershed, wildlife habitat, and fuel loading conditions. Therefore, I have determined that the environmentally preferable alternative is Alternative 2 as it balances the short-term impacts of implementing the project with the long-term benefits that will result.

Unavoidable Adverse Effects

Under the Modified Proposed Action, approximately 8,900 acres of ponderosa pine forest surrounding the base of Bill Williams Mountain will have reduced stand densities similar to pre-settlement reference conditions. The Modified Proposed Action will result in the largest reduction in large trees initially, but then remaining trees will grow faster due to increased sunlight, nutrients and water (DEIS, Section 2.5).

Alternative 2 will result in more than half of the project area to the historic fire regime range available for fighting wildland fire through direct attack tactics and Alternative 3 and 4 would result in less than half the area available for direct attack tactics (DEIS, Sections 2.5 and 3.3).

Alternative 2 will result in a short-term increase in particulate matter from burning. There would also be short-term increases in soil disturbance, erosion potential, and soil compaction (DEIS, Sections 2.5 and 3.4).

Alternative 2 will result in short-term reduction of Mexican Spotted Owl habitat, but Alternative 2 moves the project area toward the most sustainable conditions. Alternative 2 provides the greatest amount of protection to nest area and PFA's from active crown fire (DEIS, Sections 2.5 and 3.6).

Alternative 2 also results in a temporary reduction in forest visitors, and short-term effects to scenery management due to mechanical treatments (DEIS, Sections 2.5, 3.10 and 3.11). And, Alternative 2 will also result in the greatest short-term potential increase in weeds.

My Decision

Based upon my review of the alternatives and environmental consequences, I have decided to implement Alternative 2. Alternative 2 and the associated environmental effects are described in detail in the Bill Williams Mountain Restoration Project FEIS. My decision to implement the modified proposed action will allow for commercial timber harvest treatments and non-commercial mechanical treatments on approximately 15,200 acres and prescribed burning on up to 15,200 acres.

This Record of Decision documents my decision and rationale for the selection of Alternative 2. Alternative 2 is described in the FEIS between pages 26 and 28. My decision includes the associated transportation system, the design features, mitigation measures, and monitoring described in Chapter 2 of the FEIS. My conclusion is based on a thorough review of the FEIS, public comments, and the project record. I considered relevant scientific information, public concerns and opposing viewpoints, incomplete information, scientific uncertainty, and risk.

On a landscape scale, the project works toward the goals of reducing the risk of and increasing the resistance to wide-scale disturbance events in the form of high intensity, stand replacing wildfire; improving forest health; and protecting the watershed for the City of Williams and the health and safety of its residents. The majority of activities will be accomplished over a 10-year period, following an implementation schedule that will prioritize treatments. Maintenance burns will continue for up to 40 years.

Decision Rationale

My decision to select Alternative 2 - Modified Proposed Action is based on its responsiveness to the project's purpose and need and its ability to mitigate issues that arose through the public involvement process.

Responsiveness of Alternative 2 to the Purpose and Need

As with many areas on the Kaibab National Forest, changes in forest dynamics have occurred within the Bill Williams Mountain Restoration Project area during the past 130 years. Although fire exclusion has been a primary factor in these changes, other management practices have contributed as well. As a result, forest density has increased and species composition has changed with the forest becoming more at risk and less resistant to wildfire, insect, and disease problems.

The purpose of the Bill Williams Mountain Restoration Project is to improve the health and sustainability of forested conditions on and surrounding Bill Williams Mountain by reducing hazardous fuels and moving vegetative conditions in the project area toward the desired conditions. This work will be done to directly and indirectly improve the watershed conditions contributing to the City of Williams water supply.

Based on my review of the effects analysis in the FEIS, I believe Alternative 2 best meets the stated purpose and need of the project to protect the Bill Williams Mountain watershed from high intensity, stand replacing wildfire while complying with applicable laws and regulations and addressing the public's concerns. Furthermore, the selected action provides practicable environmental safeguards, including features designed to avoid or reduce environmental impacts; mitigation measures designed to avoid, reduce, or minimize impacts; and a monitoring plan to ensure that resulting impacts comply with applicable laws and regulations and are within the range predicted in the FEIS impacts analysis. Refer to Chapter 2 of the FEIS for a description of the components of Alternative 2 and to Chapter 3 of the FEIS for a complete description of the environmental impacts predicted for Alternative 2.

Forest Structure

Alternative 2 provides proactive management of the forest and will result in a substantially reduced risk of tree mortality from wildfire and bark beetles in high-density stands. The longevity and vigor of larger older trees will increase over time because there will be less competition from mid-aged trees. A mix of trees of different ages and species will be allowed to develop over time and the risk of large stand replacement fires will be reduced. Alternative 2 will create a more diverse forest structure with a broader distribution of tree age classes, increased stand vigor, increased forest resiliency, faster growth and development of individual trees, and decreased levels of dwarf mistletoe infections. Alternative 2 has the greatest increase in understory abundance and productivity of all alternatives.

Reducing the amount of dead and down woody debris, ladder fuels, and unnaturally high tree density would greatly reduce the risk of effects to the mountain, which is a traditional cultural property (TCP), from stand

replacing wildfire. Treatments will open the forest canopy and alter its scenic integrity and potentially affect plants collected for ceremonies and medicinal use.

Alternative 2 also creates more openings in the forest canopy, restores natural meadows and savannahs, increases development of understory grasses/forbs/shrubs, and increases vigor and sustainability of aspen clones.

Alternative 2 will promote the production of grasses, forbs, and shrubs in the understory. Alternative 2 is also the best for overall forest health, the lowest mistletoe levels, highest stand and individual tree growth and vigor, and lowest susceptibility to epidemic beetle attack.

High Intensity Stand-Replacing Wildfire

Alternative 2 will reduce risk of high intensity stand replacing fires by opening forest canopies and reducing understory fuels. Alternative 2 includes thinning small trees, treating or removing slash, and applying prescribed fire to the project area, which will substantially improve the ability of the forest to withstand a major wildfire should one start in the planning area or enter from adjacent areas. Alternative 2 includes prescribed fire under low or moderate weather and fuel conditions to help alleviate these issues. Managers will have increased ability to consider these options when they are managing a natural ignition wildfire for multiple objectives.

Alternative 2 moves most of the area to a fire regime within historical range and demonstrates a marked reduction in active crown fire potential in the project area from 61 percent to 18 percent, which is a greater reduction than any of the other alternatives. This will greatly increase the potential for control of a fire and reduce the spotting potential by shifting anticipated fire behavior from active crown fire to surface fire in many areas. Fuel loadings are reduced, canopy base heights increased, and canopy bulk densities are lowered leaving less potential for large areas of crown fire. Habitat, watershed, and plants will be more defensible from high intensity stand replacing wildfire.

Alternative 2 most reduces probability of active crown fire in MSO habitat. Uneven-aged management most sustainably conserves MSO habitat at or toward desired conditions. Alternative 2 most protects nest areas and Post-Fledging Family Areas (PFAs) from active crown fire. Alternative 2 most restores landscapes outside goshawk PFAs toward conditions to which the species adapted and evolved.

Arizona Bugbane Botanical Area

Alternative 2 provides the greatest opportunity for Arizona bugbane (*Actaea arizonica*) habitat enhancement through thinning and prescribed fire. Prescribed fire can improve tree health by reducing density, which may also result in long-term resistance to disturbance (e.g., insect outbreaks, drought), thus enhancing the long-term sustainability of the Arizona bugbane microenvironment.

Alternative 2 will also result in the greatest reduction in the risk to Arizona bugbane from high-intensity wildfire, which will provide the greatest safeguard against the undesirable effects that are associated with high-intensity fires such as intense flooding. Low intensity thinning of coniferous trees in the Botanical Area may also promote the health and sustainability of Arizona bugbane's deciduous tree associates.

Old Growth

The Land and Resource Management Plan for the Kaibab National Forest (USDA 2014, p. 153) defines old growth as follows:

“Old growth in southwestern forested ecosystems is different than the traditional definition based on northwestern infrequent fire forests. Due to large differences among Southwest forest types and natural disturbances, old growth forests vary extensively in tree size, age classes, presence and abundance of structural elements, stability, and presence of understory (Helms 1998). Old growth refers to specific habitat components that occur in forests and woodlands—old trees, dead trees (snags), downed wood (coarse woody debris), and structure diversity (Franklin and Spies 1989, Helms 1998, Kaufmann et al. 2007). These important habitat features may occur in small areas, with only a few components, or over

larger areas as stands or forests where old growth is concentrated (Kaufmann et al. 2007). In the Southwest, old growth is considered “transitional” (Oliver and Larson 1996), given that the location of old growth shifts on the landscape over time as a result of succession and disturbance (tree growth and mortality). Some species, notably certain plants, require “old forest” communities that may or may not have old growth components but have escaped significant disturbance for lengths of time necessary to provide the suitable stability and environment”

Alternative 2 provides for a flow of old-growth conditions and function over time at the fine, mid, and landscape scale. Spatial shifting or transition of old growth on the landscape over time will remain consistent with historic conditions. While Alternative 2 allows for the removal of some large, mature, and old trees, the vegetation analysis demonstrates a greater net gain of large trees over time than any other alternative. Moreover, managing for restored forest conditions that are similar to natural conditions will restore resiliency and the evolutionary environment of these forests, providing the best opportunity for these forests to persist and adapt to future climates (Reynolds and others 2013).

Alternative 2 will provide for goshawk nest areas, which are typically well-defined tree groups that meet the definition of old growth. Alternative 2 also provides larger areas managed for MSO recovery nest/roost habitat, MSO PAC, and Arizona bugbane that will be dominated by old growth patches and tree groups.

Mitigation measures will maintain and protect pre-settlement trees, the old trees that lived during the time period where natural functions such as frequent fire events persisted naturally under historic fuel loadings. The locations of these old trees across the landscape helped define existing old growth on the ground. The project manages for old growth and old-growth components for all forest and woodland vegetation types, which activities maintain or make progress toward. Additionally, Alternative 2 follows Forest Plan guidance to generally not remove structural components associated with old growth including large old ponderosa pine trees with reddish-yellow wide platy bark, mature trees with large dwarf mistletoe-induced witches' brooms, large snags, partial snags, and trees (greater than 18 inches dbh) with broken tops, cavities, sloughing bark, and lightning scars. In addition, Alternative 2 should generally retain at least historic frequencies of trees by species across broad age and diameter classes at the mid-scale. As such, the largest and oldest trees will usually be retained.

Managing for large trees across the landscape

The Kaibab National Forest Plan (USDA 2014, p. 30) provides guidelines for managing for large trees across the landscape:

Project design and treatment prescriptions should generally not remove:

Large, old ponderosa pine trees with reddish-yellow, wide platy bark, flattened tops, with moderate to full crowns and large drooping or gnarled limbs (e.g. Thomson's age class 4, Dunning's tree class 5 and/or Keen's Tree Class 4, A & B [appendix C]).

Mature trees with large dwarf mistletoe induced witches' brooms suitable for wildlife nesting, caching, and denning, except where retaining such trees would prevent the desired development of uneven-aged conditions over time.

Large snags, partial snags, and trees (>18 inches dbh.) with broken tops, cavities, sloughing bark, lightning scars >4 inches wide, and large stick nests (>18 inches in diameter).

This analysis measures large tree retention as numbers of trees remaining after treatment, growing space for allocated large tree and longevity of large trees. Large trees are defined as 18" + DBH trees due to the relationship to VSS 5 and 6 groups (starting with an average diameter of 18" DBH). The Vegetative Structural Stage (VSS) 5 and 6 group average diameter limits provide an ecological tie to a diameter. Implementing Alternative 2 will result in the most large trees through time and Alternative 2 will also retain many large trees in the short-term. Recruitment of large trees is higher in Alternative 2 due to the reduced potential for high-intensity stand replacing wildfire and less competition.

Scenic Resources

The Kaibab National Forest Plan (USDA 2014, p. 66) provides the following guideline for scenic resources:

The “Kaibab NF Recreation Opportunity Spectrum and Scenery Management Handbook” (USDA 2004) and “Built Environment Image Guide” should be used for recreation management and project design.

The Kaibab National Forest Plan (USDA 2014, p. 5) also provides direction for following guidelines in projects:

Guidelines are technical design criteria or constraints on project and activity decision making that help to make progress toward desired conditions. A guideline allows for departure from its terms, so long as the intent of the guideline is met. Deviation from a guideline must be specified in the decision document with the supporting rationale. When deviation from a guideline does not meet the original intent, a plan amendment is required.

The Recreation Opportunity Spectrum/Scenery Management System (ROS/SMS) Guidebook states recovery timelines for Scenic Integrity Objectives (SIO) 2 and SIO 3 of one year and two years respectively, after implementation. The Kaibab National Forest Recreation Opportunity Spectrum and Scenery Management Guidebook, Appendix B allows for the SIO to drop one level during critical project and management activities, such as the restoration of Bill Williams Mountain. It is unlikely that the SIO recovery to satisfactory levels will meet the expected timelines; therefore, SMS direction for the SIO levels 2 and 3 would be met within 5-10 years after project completion. Although this represents a

short-term deviation from this guideline, the intent of the guideline will be met in 5 to 10 years through the mitigation measure outline in section 2.3 Chapter 2 FEIS.

Responsiveness of Alternative 2 to the Significant Issues

The selected action is responsive to the issues described in Chapter 1 of the FEIS. Alternative 2 was modified during the comment analyses for the DEIS and the SDEIS to respond to significant issues regarding potential impacts on biological resources, cultural resources, and the surface water component of water resources. Alternative 2 also responds to the other significant issues through design features and mitigation measures that reduce potential environmental and social impacts.

Reasons for Not Selecting Alternatives 1, 3, or 4

I selected Alternative 2 rather than Alternative 1 because Alternative 1 does not meet the purpose and need of the project. Heavy fuel loadings, low canopy base heights and dense canopy bulk densities would continue to exist under Alternative 1, which preserves the high potential for high intensity stand replacing wildfire in the project area. This would directly affect wildlife habitat, watershed integrity, plant communities, cultural resources, and the municipal water supply for the City of Williams.

Alternative 1 would perpetuate a high probability of active crown fire (61%) in the project area. A high intensity stand replacing fire could degrade most or all MSO and northern goshawk habitat in the project area. Under Alternative 1, insect and disease levels would likely continue to increase, decreasing forest health and causing increased tree mortality and fuel accumulations. Herbaceous ground cover would continue to decline and soil duff layers would increase as forest canopies continue to close. Abundance and productivity of understory species and species richness may decline in the long-term under Alternative 1. The poorly located roads that would be obliterated under the Action Alternatives would continue to erode, further decreasing soil productivity in these areas and contributing to downstream surface water quality degradation.

The continued deposition of fuels in the area would increase the likelihood of a high intensity stand replacing wildfire on Bill Williams Mountain. It is likely that the Bill Williams Mountain Traditional Cultural Property, its scenic integrity, and plants collected by tribes and used for ceremonial purposes would suffer adverse effects from intense fire behavior. The continued deposition of fuels under Alternative 1 would also increase the likelihood of

a high intensity stand replacing wildfire that could cause many of the prehistoric and especially the few cultural sites with combustible features to suffer adverse effects from high intensity fire and post-fire erosion.

The communication site at the top of Bill Williams Mountain would be at the highest risk of loss due to high intensity stand replacing wildfire under Alternative 1. Although there would be no upfront cost to implement Alternative 1, the risk of high costs to mitigate high intensity stand replacing wildfire and flooding would likely exceed the cost of implementing any action alternative.

I selected Alternative 2 rather than Alternative 3 because Alternative 2 better meets the purpose and need of the project. Alternative 3 has a lesser ability to improve forest health, reduce mistletoe levels, increase tree growth and vigor, and reduce susceptibility to epidemic bark beetle attack and catastrophic stand replacing fire.

Alternative 3 moves less than half of the project area to a fire regime that is within the historic range, and portions of the project area would be more likely to depart from this restored fire regime more rapidly in future than under Alternative 2. Under Alternative 3, 27% of the project area would have the potential for active crown fire, which is higher than Alternative 2.

Although fuel loadings are reduced, canopy base heights are increased, and canopy bulk densities are lower under Alternative 3, habitat and watersheds are less defensible against active crown fire under Alternative 3 than Alternative 2. Rare plant species will continue to be at risk of high intensity stand replacing wildfire, particularly on the north face of the mountain.

Alternative 3 would not reduce the probability of active crown fire in MSO habitat as much as Alternative 2. Even-aged management (9" diameter cap on tree-cutting) moderately conserves MSO habitat at or moves it toward desired conditions. Alternative 3 moderately protects nest areas and PFAs from active crown fire, but less than Alternative 2. Alternative 3 would moderately restore foraging areas (i.e., landscapes outside PFAs) toward desired conditions, but to a lesser degree than Alternative 2.

Alternative 3 has a slightly lower increase in abundance, productivity, and understory species richness than Alternative 2. Reducing the amount of dead and down woody debris, ladder fuels, and unnaturally high tree density in Alternative 3 would greatly reduce the risk of effects to the TCP from stand replacing wildfire, and treatments would open the forest canopy and alter its scenic integrity and potentially affect plants collected for ceremonies and medicinal use. However, these effects occur to a lesser degree than under Alternative 2. The Bill Williams Communication Site would be at greater risk than under Alternative 2.

I selected Alternative 2 rather than Alternative 4 because Alternative 2 better meets the purpose and need of the project. Alternative 4 moves less than half of the project area to historic fire regime range. Under Alternative 4, 35% of the project area has the potential for active crown fire, which is higher than Alternative 2. Ecosystem components would be more likely lost in future, and some of the project area would be likely to regress more rapidly in the future under Alternative 4. Habitat and watershed have higher potential of higher intensity and stand replacing wildfires and a potential increase in mortality during prescribed fire due to higher stand densities than Alternative 2.

Rare plant species would be at a higher risk of high fire severity than under Alternative 2. Alternative 4 does not reduce the probability of active crown fire in MSO habitat as much as Alternative 2. Prescribed fire alone does little to conserve MSO habitat at or toward desired conditions. Alternative 4 also least protects nest areas and PFAs from active crown fire, and least restores foraging areas toward conditions to which the species adapted and evolved.

Alternative 4 has a lower increase in understory abundance, productivity, and species richness. The steep slopes of Bill Williams Mountain would not be treated under Alternative 4, leaving the Traditional Cultural Property more vulnerable to the effects of post fire flooding and erosion than under Alternative 2. The Bill Williams Communication Site would be at greater risk than under Alternative 2.

Consultation with Government Agencies and Tribes

Consultation with many Federal and State agencies is required and was completed during the DEIS comment period. A list of agencies consulted is found in Chapter 4 of the FEIS. Most notably, the Arizona Game and Fish Department and U.S. Fish and Wildlife Service played key roles in the project. Both agencies participated in many of the interdisciplinary meetings and field trips and provided input throughout the project. The Forest Service collaborated extensively with the U.S. Fish and Wildlife Service throughout all phases of project development, especially as it pertains to conservation of Mexican spotted owls (see section 3.6 of chapter three for more information).

Government-to-government consultation with tribes is guided by existing law, regulation, and policy, including the National Environmental Policy Act (NEPA), the Archaeological Resources Protection Act (ARPA), the National Historic Preservation Act (NHPA), the American Indian Religious Freedom Act (AIRFA), the Native American Graves Protection and Repatriation Act (NAGPRA), the National Forest Management Act (NFMA) of 1976, the Religious Freedom Restoration Act (RFRA), Executive Order 13007-Indian Sacred Sites, Executive Order 13175-Consultation and Coordination with Indian Tribal Governments, and Executive Order 12898 - Environmental Justice. The Kaibab National Forest has entered into Memoranda of Understanding with the Havasupai Tribe, the Hualapai Tribe, the Hopi Tribe, and the Kaibab Band of Paiute Indians to establish a standard process for consultation with each tribe.

The Kaibab National Forest recognizes that area tribes have cultural ties and knowledge about the lands now managed by the USDA Forest Service. Many tribal members regularly visit the Forest to gather traditional resources and to visit traditional cultural properties and sacred sites. Therefore, tribes share an interest in the management of National Forest System lands.

To recognize the high level of use of the forest by tribal members and because area tribes have unique interests in the Forest, the Kaibab National Forest has conducted extensive tribal consultation and scoping of tribal communities throughout the environmental analysis process. This consultation process reflects a long-standing commitment by the Forest to share the stewardship of public lands with area tribes. For the Bill Williams Mountain Restoration Project, tribal consultation was conducted at the government-to-government level with concerned tribes according to established memoranda of understanding and pertinent laws and regulations. Additionally, the Kaibab National Forest scoped the project with tribal communities that utilize the Forest. The Kaibab National Forest initiated consultation with tribes in the earliest stages of analysis, and incorporated tribal comments into the development of the alternatives.

Based on consultations with the tribes (FEIS p 306-309), all tribes support the purpose and need for the project. No tribe has recommended Alternative 1- the No Action Alternative. Tribes agree with the ID team's assessment that current conditions in the project area present an unacceptable long-term risk to cultural and traditional resources. While Alternatives 2, 3 and 4 propose active thinning treatments on the mountain, tribes have stated that these activities will result in a long-term beneficial effect to the Bill Williams Mountain Traditional Cultural Property.

Consultation occurred with the Arizona State Historic Preservation Office and a finding of "no adverse effect" was made for this project.

Consistency with Other Laws and Regulations

After consideration of the discussion of environmental consequences (FEIS, Chapter 3), I have determined that Alternative 2 is consistent with other laws and regulations as outlined in the FEIS. Detailed discussions of laws and regulations are provided in the FEIS, Chapter 3.

The National Forest Management Act (NFMA)

Consistency with the Land and Resource Management Plan for the Kaibab National Forest and Other NFMA Requirements

The National Forest Management Act requires projects to comply with forest plan direction. The Land and Resource Management Plan for the Kaibab National Forest establishes management direction for the Kaibab National Forest. This management direction is achieved through the establishment of Forest Plan goals and objectives, standards and guidelines, and management area goals and accompanying standards and guidelines. Projects and activity decisions must demonstrate and explicitly document consistency and compliance with Forest Plan Forest-wide standards, management area standards, and monitoring plan requirements.

The selected alternative is consistent with the 2014 Land and Resource Management Plan for the Kaibab National Forest. This action responds to the goals and objectives outlined in the Forest Plan and helps maintain and/or move the project area towards desired conditions described in this plan.

Forest Plan Revision

During development, the Bill Williams Mountain Restoration Project was designed under the framework provided by the 1988 Kaibab National Forest Plan, as amended (1988 Forest Plan). On February 3, 2014, a Record of Decision (ROD) was issued for the revised Land and Resource Management Plan for the Kaibab National Forest, superseding the 1988 plan. As a result, the ROD for the Bill Williams Mountain Restoration Project is being issued under the 2014 Land and Resource Management Plan for the Kaibab National Forest.

A consistency review for the Bill Williams Mountain Restoration Project with the Forest Plan resulted in a determination that implementing the modified proposed action or any of the action alternatives would be consistent with the revised plan and would result in conditions that are consistent with management direction in the Forest Plan.

Forest Plan Amendments

There are no Forest Plan amendments included in my decision. The modified proposed action is found to be consistent with all standards and guidelines in the 2014 Forest Plan and thus no longer requires any Forest Plan amendments.

National Environmental Policy Act (NEPA)

NEPA establishes the format and content requirements of an environmental analysis and documentation as well as requirements for public involvement and disclosure. The entire process of preparing this EIS was undertaken to comply with NEPA.

The National Historic Preservation Act: The Arizona State Historic Preservation Office

Consultation occurred with the Arizona State Historic Preservation Office (SHPO). A finding of “no adverse effect” was made for the Bill Williams Mountain Restoration Project. This finding was based on the knowledge that although cultural resource sites may be impacted by the proposed undertaking, site avoidance and project design criteria will provide protection of eligible site characteristics. The probability that certain eligible sites

may be impacted during project activities leads to this finding of effect as described in 36 CFR 800.5 (b) and 36 CFR 800.16(i) (Federal Register Vol. 65, No. 239; Tuesday, December 12, 2000; pages 77730 and 77738). The SHPO concurred with this finding of “no adverse effect” on August 6, 2012.

American Indian Religious Freedom Act of 1978

This act provides for the maintenance of “access to sites ... freedom to worship through ceremonials and traditional rites.” This decision allows for continued access and does not abridge any rights to continue “worship” in the project area.

Executive Order 13007 - Indian Sacred Sites

This order indicates that Federal land management agencies “shall, to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions, (1) accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and (2) avoid adversely affecting the physical integrity of such sacred sites.” This order is based on a “government-to-government” relationship between agencies and tribal government. There have been ongoing government-to-government consultations on the Bill Williams Mountain Restoration Project under section 106 of NHPA. Access to sacred sites and their physical integrity will be maintained with this project (see “Consultation with Government Agencies and Tribes” section above).

The Endangered Species Act and Regional Forester’s Sensitive Species

Details regarding actual species found within the Bill Williams Mountain Restoration Project area and potential effects of proposed activities on those species and their habitat are discussed in the “Wildlife” section in Chapter 3 of the FEIS. The Endangered Species Act requires protection of all species listed as threatened or endangered by Federal regulating agencies. A biological assessment was prepared to document the possible effects of the proposed activities to endangered, threatened, and sensitive plant and wildlife species within the Bill Williams Mountain Restoration Project area. Appropriate coordination, conferencing, and consultation with the U.S. Fish and Wildlife Service have been completed as directed under Section 7 of the act (see previous section of this document titled “Consultation with Government Agencies and Tribes”).

I have determined that implementation of Alternative 2 will result in a “may affect, and is likely to adversely affect” the MSO and its Critical Habitat. However, it would not cause a trend toward loss of viability, the project’s impacts would not be enough to change forest-wide population or habitat trends for the species, and the project will not cause an irreversible or irretrievable commitment of resources per section 7(d) of the Endangered Species Act.

The biological opinion issued by the U.S. Fish and Wildlife Service after consultation concludes that implementation of the project will contribute to the likelihood of the survival and recovery of the Mexican Spotted Owl throughout its range (“Biological Opinion – Bill Williams Mountain Restoration Project,” 22140-2011-F-0233, May 5, 2015). The biological opinion also concludes that the project is neither likely to jeopardize the continued existence of the spotted owl, nor result in destruction or adverse modification of spotted owl critical habitat. In their opinion, the project will ultimately improve forest health and reduce the likelihood of high-severity wildfire, the primary threat to spotted owl habitat on Bill Williams Mountain.

Arizona bugbane *Actaea arizonica* is a Forest Service Sensitive Species and Conservation Agreement Species. Alternative 2 will result in a determination of may impact individuals of Arizona bugbane, but is not likely to result in a trend toward Federal listing or loss of viability because of the implementation of the mitigation measures that have been designed to protect the important habitat components that provide the unique microenvironment for Arizona bugbane. Because Alternative 2 provides the greatest opportunity for Arizona bugbane habitat enhancement, Alternative 2 will not contribute to a trend toward Federal listing and a loss of species and population viability.

Alternative 2 may impact individuals of Rusby milkvetch *Astragalus rusbyi*, Arizona leather flower *Clematis hirsutissima*, Flagstaff beardtongue *Penstemon nudiflorus*, Arizona phlox *Phlox amabilis*, Cliff fleabane *Erigeron saxatilis*, and Mt Dellenbaugh sandwort *Arenaria aberrans*, but is not likely to result in a trend toward Federal listing or loss of viability.

Determination of Effects for Sensitive Species

Bald Eagle, Peregrine Falcon, and Northern Goshawk

Alternatives 2-4 may adversely impact the above species in the short-term but could cause a long-term beneficial impact. Alternatives 2-4 would not cause a trend toward listing or loss of viability of these species. More habitats would be protected and restored for these species under Alternative 2 than under Alternatives 3-4, as there would be less fire hazard and more flexibility to promote the growth of the largest trees that goshawk use for nesting and which serve as recruitment snags and down logs on which goshawk prey species rely. More habitats would be restored for falcon and goshawk prey species under Alternative 2 than under Alternatives 3-4, as there would be more flexibility to restore openings that existed in pre-settlement times. For these three species Alternative 4 would have less road-related impacts than Alternatives 2-3. Unintentional take of eagles would not occur under any of the Alternatives.

Navajo Mogollon Vole

Alternatives 2-4 may affect individuals but would not cause a trend toward listing or loss of viability for the species. More vole habitat would be restored for this species under Alternative 2 than under Alternatives 3-4, as there would be more flexibility to restore openings that existed in pre-settlement times. Alternative 4 would have less road-related impacts than Alternatives 2-3, as no new permanent roads would be constructed under this Alternative.

Spotted Bat, pale Townsend's big-eared, and Allen's Lappet-browed bat

Alternatives 2-4 may adversely impact these bat species in the short-term but would cause a long-term beneficial impact. Alternatives 2-4 would not cause a trend toward listing or loss of viability. More habitats would be restored for these species under Alternative 2 than under Alternatives 3-4, as there would be more flexibility to promote the growth of the largest trees. Alternative 4 would have less road-related and thinning impacts than Alternatives 2-3.

Determination of Effects for Management Indicator Species

Grace's Warbler

Alternatives 2-4 would not cause a change in Forest-wide habitat quality or alter the population trend for the species. More habitat would be restored and protected for this species under Alternative 2 than under Alternatives 3-4, as there would be less fire hazard and more flexibility to promote the growth of the largest trees and the herbaceous understory that this species relies on for nesting, roosting, and foraging. Alternative 4 would have less road-related impacts than Alternatives 2-3.

Western Bluebird

Alternatives 2-4 could cause a long-term beneficial impact. Alternatives 2-4 would not cause a change in forest-wide habitat or population trend for the species. More habitat would be restored for this species under Alternative 2 than under Alternatives 3-4, as there would be less fire hazard and more flexibility to promote the growth of the largest trees and the herbaceous understory that the species rely on for nesting, roosting, and foraging. The action alternatives would largely restore the project area to the more open ponderosa pine habitat condition that this species is an indicator for. Alternative 4 would have less road-related impacts than Alternatives 2-3.

Ruby-crowned Kinglet

Alternatives 2-4 would not cause a change in forest-wide habitat or population trend for the species. As the mixed conifer forests in the project area exhibit uncharacteristically high fuel loadings, the probability of unintentionally torching large patches of trees (including large snags and pre-settlement trees) would be high in these areas if they did not first receive mechanical treatments. Alternatives 2-4 would allow prescribed fire to occur in kinglet habitat when conditions of weather and fuel moistures are most favorable, so loss of important habitat components would be much less than if a wildfire were to occur under extreme conditions of weather and fuel moistures. The action alternatives would improve habitat quality for kinglets as it would assist in moving the limited amount of habitat on the district closer to reference condition.

Alternative 2 would best conserve kinglet habitat, as this Alternative would achieve the greatest balance of conserving large trees, canopy cover, and other attributes important to ruby-crowned kinglets while most reducing the probability of active crown fire in and around the PAC (Tables 3 and 4). Alternative 3 would have an intermediate effect on reducing fire hazard, and it would have the greatest effect on promoting individual kinglet habitat attributes of importance. Alternative 4 would do little to reduce fire hazard (Tables 3 and 4) and it would result in the greatest loss of important habitat attributes of the Action Alternatives. However, Alternative 4 would have less road-related impacts on kinglet habitat than Alternatives 2-3. None of the Action Alternatives' effects are enough to change Forest-wide habitat or population trends for the ruby-crowned kinglet.

Pronghorn Antelope

Alternatives 2-4 may impact pronghorn antelope in the short-term but would cause a long-term beneficial impact. Alternatives 2-4 would keep Forest-wide habitat or population trends for pronghorn antelope as stable to increasing. More habitat would be restored for the species under Alternative 2 than under Alternatives 3-4, as there would be more flexibility to restore grasslands, meadows, and forest openings that existed in pre-settlement times. Alternative 4 would have less road-related impacts than Alternatives 2-3, as no new permanent roads would be constructed under this Alternative.

Determination of Effects for Migratory Birds

Alternatives 2-4 would not cause a trend toward listing or loss of viability, or change community trends for birds. In general, more habitat would be restored for birds under Alternative 2 than under Alternatives 3-4, as there would be more flexibility to restore grasslands, meadows, woodlands, and forests to their pre-settlement conditions. Alternative 4 would have less road-related impacts than Alternatives 2-3, as no Maintenance-Level 1 Roads would be constructed. Unintentional take may occur for all species but bald eagle, Swainson's Hawk, Ferruginous Hawk, Peregrine Falcon, and Lark Bunting. These exceptions exist because these species do not breed in the area or they nest on cliffs or high in trees within grasslands and the probability of fire entering or causing smoke-related asphyxiation in these fine, flashy fuels is so low that it is negligible. Although unintentional take may occur to some migratory bird species, the widespread distribution of these species over hundreds of thousands of acres (BNA Online 2012) precludes such take from causing a measurable effect to the populations of the species.

The Migratory Bird Treaty Act of 1918

As identified in the FEIS, there are no designated important bird areas (IBAs) or important over-wintering areas (large wetlands) in or in the vicinity of the project area that would be expected to be impacted by activities prescribed in Alternative 2. The EIS discloses that Alternative 2 will have positive effects on migratory birds and their habitat (FEIS pp. 222-227). There is the potential of unintentional take occurring due to the implementation of the project, however, no measureable negative effects to any of the bird populations would occur (FEIS p. 246). No violations of the Migratory Bird Treaty Act or EO 13186 are anticipated.

The Clean Water Act, 1982 and 303(d)

This act is the basis for the Intergovernmental Agreement between the Arizona Department of Environmental Quality (ADEQ) and Forest Service for the control of nonpoint source pollution and maintenance of clean water (ADEQ Contract No. HH-1037). This is accomplished through planning, application, and monitoring of best management practices, which are recognized as the primary means to control nonpoint source pollution on National Forest System lands. Alternative 2 incorporates project design features that would ensure compliance with these regulations.

The Clean Air Act, as amended in 1990

As discussed in Chapter 3 of the FEIS and in supporting documents, implementation of Alternative 2 and associated management actions is compliant with the Clean Air Act, as amended in 1990. Fire managers will coordinate prescribed burning under the Arizona State Smoke Management Rule which implements the Clean Air Act and contains regulations that all State and Federal natural resource agencies must follow before a prescribed burn is ignited.

Civil Rights and Environmental Justice

Executive Order 12898 requires Federal agencies to identify and address any disproportionately high and adverse human health or environmental effects on minority and low income populations. I have determined that there would be no discernable impacts from the selected alternative in the effects on Native Americans, women, other minorities, or the Civil Rights of any American citizen (see Chapter 3 of the FEIS).

Administrative Review

Objection under 36 CFR 218

Planning for the Bill Williams Mountain Restoration Project began under the appeal regulations (36 CFR 215). However, because a Record of Decision was not signed before September 27, 2013, the draft Record of Decision was subject to the objection procedures (36 CFR 218, subparts A and B) under the “Project Level Pre-decisional Administrative Review Process.” The 45-day objection period was initiated by a legal notice published in the *Arizona Daily Sun* on September 15, 2015 and ran through October 30, 2015. No objections were received.

Project Implementation, Monitoring, and Coordination

Implementation may begin immediately following the date of this final decision. I have reviewed the Bill Williams Mountain Restoration Project FEIS and associated documents, and I believe there is adequate information within these documents to provide a reasoned choice of action. I am fully aware of the possible adverse environmental effects that cannot be avoided with Alternative 2 described in the environmentally preferable alternative section of this ROD. I have determined that these risks will be outweighed by the benefits of protecting Bill Williams Mountain and its associated resources. Implementing Alternative 2 in conjunction with any past, present, or reasonably foreseeable future actions will cause no unacceptable cumulative impact to any resource.

Monitoring during project implementation will include the monitoring listed in Chapter 2 of the FEIS. Specifically, continued monitoring, collaboration, and technical assistance during project implementation will occur with the U.S. Fish and Wildlife Service related to Arizona Bugbane and management of the Arizona Bugbane Botanical Area.

Procedure for Change during Implementation

Minor changes may be needed during implementation to better meet onsite resource management and protection objectives. In determining whether and what kind of further NEPA action is required, I will consider the criteria to supplement an existing environmental impact statement in 40 CFR 1502.9(c) and FSH 1909.15, sec. 18, and in particular, determine whether the proposed change is a substantial change to the intent of the selected alternative as planned and already approved, and whether the change is relevant to environmental concerns. Connected or interrelated proposed changes regarding particular areas or specific activities will be considered together in making this determination. The cumulative impacts of these changes will also be considered.

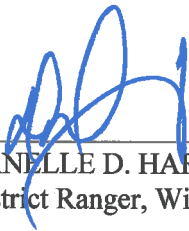
Contacts for Information

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Additional information is also available on the project website at <http://www.fs.usda.gov/project/?project=34690>.

Responsible Official Signature



DANIELLE D. HARRISON
District Ranger, Williams Ranger District


Date